

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year) **See form PCT/ISA/210**

Applicant's or agent's file reference
K-48100-25

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2005/000237

International filing date (day/month/year)
12.01.2005

Priority date (day/month/year)
12.01.2004

International Patent Classification (IPC) or both national classification and IPC
B64D11/06, B60N2/30, B60N2/23, B60N2/20, B60N2/22

Applicant
AIRBUS DEUTSCHLAND GMBH

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

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Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ in written format
☐ in computer readable form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. IV

Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has:
- ☒ paid additional fees
 - ☐ paid additional fees under protest
 - ☐ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with
 - ☒ not complied with for the following reasons:
- See supplemental sheet
4. Consequently, this opinion has been established in respect of the following parts of the international application:
- ☒ all parts
 - ☐ the parts relating to claims Nos. _____

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-18	YES
	Claims		NO
Inventive step (IS)	Claims	11-18	YES
	Claims	1-10	NO
Industrial applicability (IA)	Claims	1-18	YES
	Claims		NO

2. Citations and explanations:

1. Reference is made to the following documents:
D1: DE 102 14 104 C1 (AIRBUS DEUTSCHLAND GMBH) 11 December 2003 (2003-12-11)
D2: US 2 595 582 A (HOVEN ALFRED C ET AL) 6 May 1952 (1952-05-06)
D3: WO 02/066283 A (RECARO AIRCRAFT SEATING GMBH & CO; WAGNER, WOLFGANG; BAUMANN, JUERGEN) 29 August 2002 (2002-08-29)

2. INDEPENDENT CLAIM 1

- 2.1 The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 does not involve an inventive step within the meaning of PCT Article 33(3).
- 2.2 Document D1 is considered to be the closest prior art in relation to the subject matter of claim 1. It discloses (the references between parentheses refer to this document):

passenger seat, in particular air passenger seat,

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which has the following:

- a seat frame (30) with a number of seat dividers (33),
- a number of backrests (20) which are in each case articulated on the seat frame between two seat dividers (33) and can in each case be adjusted in their position relative to the seat dividers by means of an adjusting arrangement,
- a number of seat parts which are in each case fastened to the seat frame between the seat dividers (33) and at least one of which can be folded into an approximately vertical position.

2.3 The subject matter of claim 1 therefore differs from that known from D2 in that

the adjusting arrangement for the backrest belonging to the folding seat part has a lever arrangement and a spring element which are arranged on one of the seat dividers delimiting the folding seat part on the side facing the seat part, the lever arrangement is connected pivotably to the seat divider, a first lever arm of the lever arrangement is connected to the spring element, and a second lever arm of the lever arrangement is connected to the backrest.

2.4 The problem addressed by the present invention can therefore be considered that only one seat of the air passenger seat can be designed to be folding with this construction.

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2.5	<p>The solution proposed in claim 1 of the present application cannot be regarded as inventive for the following reasons (PCT Article 33(3)):</p> <p>D2 discloses a seat which has:</p> <ul style="list-style-type: none">- a backrest (34) which can be adjusted in its position relative to the seat dividers by means of in each case an adjusting arrangement,- a seat part (31) which can be folded into an approximately vertical position,- the adjusting arrangement for the backrest belonging to the folding seat part has a lever arrangement (16) and a spring element (21) which are arranged on one of the seat dividers delimiting the folding seat part on the side facing the seat part, the lever arrangement (16) is connected pivotably to the seat divider, a first lever arm of the lever arrangement is connected to the spring element (21), and a second lever arm of the lever arrangement is connected to the backrest (34). <p>It is true that D2 shows only one seat, namely a theatre seat, but it is generally known that seats in theatres are arranged in rows. A person skilled in the art would therefore consider the adjusting arrangement of the seat described in D2 to be solution to the problem of interest and therefore incorporate it into the seat known from D1.</p> <p>2.6 A person skilled in the art would therefore combine all the features disclosed in D1 and D2 in</p>

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order to solve the problem of interest, without thereby being inventive. The solution proposed in independent claim 1 therefore cannot be regarded as inventive (PCT Article 33(3)).

3 DEPENDENT CLAIMS 2-10

Claims 2-10 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT requirements for novelty and inventive step.

4 INDEPENDENT CLAIM 11

Document D3 is considered to be the closest prior art in relation to the subject matter of claim 11. It discloses (the references between parentheses refer to this document):

Passenger seat, in particular air passenger seat, which has the following:

- a seat frame with a number of seat dividers,
- a number of backrests which are in each case articulated to the seat frame between two seat dividers and can be adjusted in their position relative to the seat dividers by means of an adjusting arrangement,
- a number of seat parts which are in each case fastened to the seat frame between the seat dividers,
- the adjusting arrangement for at least one backrest (12) having a spring element (34) which

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extends essentially parallel to a pivoting axis of the backrest and one end (62) of which interacts with the seat divider in such a way that the length of the spring element determines the inclination of the backrest.

The subject matter of claim 11 therefore differs from the known air passenger seat in that the adjusting arrangement is arranged in the backrest.

The subject matter of claim 11 is therefore novel (PCT Article 33(2)).

The problem addressed by the present invention can therefore be considered that of providing a seat which can be folded up.

The solution to this problem proposed in claim 11 of the present application involves an inventive step for the following reasons (PCT Article 33(3)):

incorporating the adjusting arrangement in the backrest is not previously known, and it does not appear obvious to carry out this measure in D1.

Claims 12-18 are dependent on claim 11 and thus likewise meet the PCT requirements for novelty and inventive step.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box IV

The different inventions/groups of inventions are:

1-10

Passenger seat with an adjusting arrangement for a backrest which belongs to the folding seat part and is arranged on one of the seat dividers delimiting the folding seat part on the side facing the seat part.

11-18

Passenger seat with an adjusting arrangement for a backrest, which has a spring element arranged in the backrest.

These inventions/groups of inventions are not so linked as to form a single general inventive concept for the following reasons (PCT Rule 13.1):

Prior art patent specification US 3,744,843 discloses an air passenger seat which has the following:

- a seat frame with a number of seat dividers,
- a number of backrests which can in each case be adjusted in their position relative to the seat dividers by means of an adjusting arrangement,
- a number of seat parts which can be folded into an approximately vertical position,
- the adjusting arrangement has a spring element which is arranged on one of the seat dividers delimiting the folding seat part on the side facing the seat part,
- the adjusting arrangement has a spring element which is arranged in the backrest, extends parallel to a pivoting

Supplemental Box

axis of the backrest and one end of which interacts with the seat divider.

A comparison of US 3,744,843 with the present claims reveals that the following features of the inventions mentioned above make a contribution to the prior art disclosed in US 3,744,843 and can consequently be regarded as "special technical features" within the meaning of PCT Rule 13:

1. Claims 1-10

The adjusting arrangement for the backrest belonging to the folding seat part has a lever arrangement and a spring element which are connected pivotably to the seat divider, a first lever arm of the lever arrangement being connected to the spring element, and a second lever arm of the lever arrangement being connected to the backrest.

2. Claims 11-18

The length of the spring element determines the inclination of the backrest.

The said special technical features are clearly different from one another and therefore cannot, as required by Rule 13.2, form a technical relationship between individual inventions.

Unity of invention could nevertheless exist if a common problem as yet not known in the prior art would be solved with the (different) special technical features.

Supplemental Box

A comparison of the problems solved by the individual inventions shows that this is not the case either:

1. Claim 1

Problem solved: special construction with a spring element arranged on the seat divider

2. Claim 11

Problem solved: a different embodiment with a linear spring element

As there is no relationship between the individual inventions with regard to either the special technical features or the problems solved by these features, they clearly do not, as required by PCT Rule 13, form a single inventive concept.

While it is true that "avoiding a restriction of the free space in front of the seat and in this way affording the possibility of a fold-up seat part and also not having to attach a separate support or bracket to the support beam" could be mentioned as a concept common to all the inventions, this concept is, as already mentioned, known from US 3,744,843 and therefore cannot be regarded as inventive.

The requirement of unity of invention (PCT Rule 13) is therefore not met, and the search has therefore been limited to the first of the said inventions.